UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/821,737 | 04/09/2004 | Jochen Schweinbenz | 10191/3610 | 1521 |

26646 7590 09/02/2009

KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

| EXAMINER | |
|---|---|
| PAPE, ZACHARY | |
| ART UNIT | PAPER NUMBER |
| 2835 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 09/02/2009 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/821,737 | SCHWEINBENZ ET AL. | |
| | Examiner | Art Unit | |
| | ZACHARY M. PAPE | 2835 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *17 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1 and 5-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 5-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. The following detailed action is in response to the correspondence filed 7/17/2009.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, “and seamlessly enclosed to” which is unclear. The Examiner initially notes that the limitation, “the one-piece cooling tube is formed of a single structural component without joining seams” already states that there are no seams between the bottom section and the one-piece cooling tube and so stating, "seamlessly" in the amendment is not necessary. Further, it is unclear what, "enclosed to the bottom section" means. In view if the Applicants' remarks regarding this limitation, it appears that the Applicant is intending to state that the one-piece cooling tube does not have any apertures or opening along the portion of the tube between the fluid inlet and the fluid outlet.

Therefore, for the purposes of examination the claim will read:

“and wherein the cooling device includes at least one one-piece cooling tube integrally formed in the bottom section and extending substantially across the length of

the bottom section, wherein the cooling tube is completely enclosed along the length of the bottom section, and wherein the entire bottom section including the one-piece cooling tube is formed of a single structural component without joining seams."

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1, 5, 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clamp et al. (US 6,302,190) in view of Cettour-Rose et al. (US 6,442,023 - hereinafter, "Cettour").

With respect to claim 1, Clamp et al. teaches (In Figs 2, 6, and 7) a housing (Material which houses the electronic components in 20, and the housing 30) for electronic control units (Generally referred to as 20), wherein the housing is situated in a motor vehicle, the housing comprising: a bottom section (30) configured to be affixed to a circuit board, and a cooling device (Including 40, 46, and 48) for enabling heat to be dissipated from the housing via a liquid flowing there-through (Column 2, Lines 31-39), wherein the cooling device is integrally formed in the bottom section (As illustrated in Fig 2), and wherein the bottom section is formed as a cooling plate (See Figs 2, 6 and 7), and wherein the cooling device includes at least one one-piece cooling tube (Fig 2, the path including and between elements 46 and 48 through which coolant flows)

integrally formed in the bottom section (See Fig 2) and extending substantially across the length of the bottom section (See Fig 2) wherein the cooling tube is completely enclosed along the length of the bottom section (See Fig 2, wherein the combination of the plate (34) and the plate (30) make for a completely enclosed tube – See Col 2, Lines 31-34). Clamp et al. fails to specifically teach or suggest that the entire bottom section including the one-piece cooling tube is formed of a single structural component without joining seams. Cettour, however, teaches a one-piece cooling tube (Generally 2) formed as a single structural component without joining seams (See Fig 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cettour with that of Clamp et al. to, predictably, provide for a piece which requires less manufacturing steps.

With respect to claim 5, Clamp et al. further teaches sectional members (52) for conducting heat and reinforcing the bottom section (30) are connected (Mechanically and Thermally) to the outside of the cooling tube (As illustrated in Fig 6).

With respect to claim 7, Clamp et al. further teaches that the cooling tube has a round cross-section (As illustrated in Figs 2 and 7, 46 and 48 both have round cross sections).

With respect to claim 8, Clamp et al. further implies in Fig 9 that an inlet of the cooling tube (94) and an outlet of the cooling tube (102) have threaded connectors leading into and out of the bottom section.

With respect to claim 9, Clamp et al. further teaches that the cooling device includes a plurality of one-piece cooling tubes integrally formed in the bottom section

(See Present Office Action Fig 1 below where the first cooling channel, and the second cooling channel, form a plurality of one-piece cooling ducts).

With respect to claim 10, Clamp et al. further illustrates that the one-piece cooling tubes are connected by at least one separate cross hole (Running along the left side of the bottom as illustrated in Fig 2 and present office action Fig 1 below).

With respect to claims 11 and 12 the limitations of the claim have been given little patentable weight because the claims contain **only** limitations pertaining to the process of making the product. In the present case, the process by which the product is made does not structurally change the final product made. Since the product in the product-by-process claim is the same as or obvious from a product of the prior art (of Clamp et al.), the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

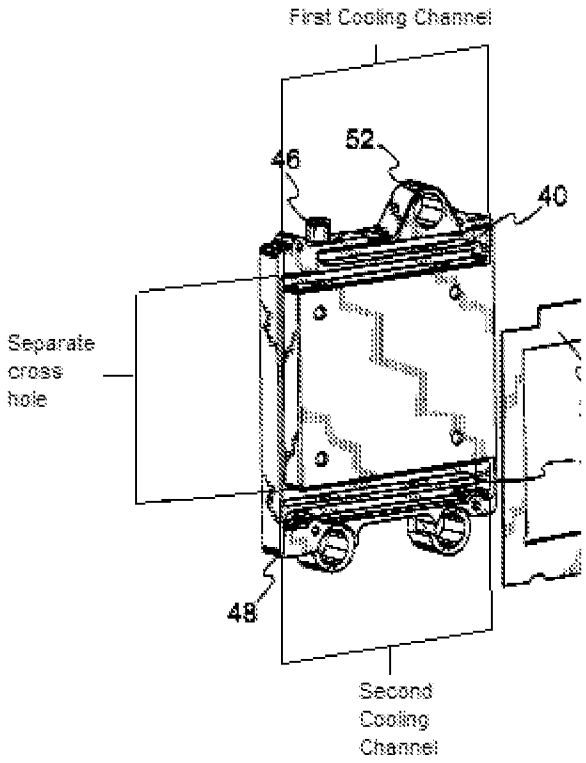


Fig 1

**4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clamp et al. in view of Cettour and further in view of Watari et al. (US 4,652,970).**

With respect to claim 6, Clamp et al. teaches the limitations of claim 1 above but is silent as to a linearly designed cooling duct. Watari et al. teaches the conventionality of having a cooling duct (43) which is linear and passes through the bottom section in a linear manner (As illustrated in Fig 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Watari et al. with that of Clamp et al. to provide effectively cooling to devices (Column 4, Lines 25-26).

### *Response to Arguments*

5. Applicant's arguments filed 7/17/2009 have been fully considered but they are not persuasive.

6. Applicants' remarks to claim 1 that, Cettour does not disclose the added limitation that the cooling tube is completely enclosed along the back plate, the Examiner respectfully notes that the present rejection does not rely on Cettour to teach the cooling tube being completely enclosed along the back plate. Rather, this is already taught by the Clamp reference (See the rejection above). The Cettour reference is merely being used to teach the conventionality of making such a cooling tube structure integral or seamless as claimed. In other words, the only difference between the invention presently claimed in claim 1 and the Clamp reference is that the back plate (34) and cooling plate (30) are all seamless (I.E. one piece or integral). Such a deficiency is clearly taught by Cettour which teaches making a cooling tube (22) integral with a plate (2).

7. With respect to the Applicants' remarks to claim 6, the Examiner notes the response to the remarks regarding claim 1 in paragraph 6 above.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZACHARY M. PAPE whose telephone number is (571)272-2201. The examiner can normally be reached on Mon.- Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zachary M Pape/
Examiner, Art Unit 2835